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# Territorial Impact Factors: An Argument For Determining Patent Infringement Based Upon Impact on the U.S. Market

Elizabeth M. N. Morris†

## INTRODUCTION

The world has increasingly become a global marketplace. A product may have components manufactured in countries A, B, and C; assembled in country D; and offered for sale in country E. Furthermore, the use of that product may take place in country F or G. In this global marketplace, how is patent infringement determined? Traditionally, under United States law, patents have been given only territorial application.<sup>1</sup> Thus, a competitor of a patented product can avoid an infringement suit by merely stepping outside of the country for one element of the process while still deriving most of his economic benefit within the United States. This narrow definition of patent infringement works poorly in a world with a global marketplace. Change is necessary.

The current trend is to analyze extraterritorial use under 35 U.S.C. § 271 sections (f) and (g), the sections of the Patent Act that grant specific and limited extraterritorial protection. However, as can be seen in the recent cases of *Eolas Tech. Inc., v. Microsoft Corp.* and *AT&T Corp. v. Microsoft Corp.*, both of which analyzed extraterritorial use under 35 U.S.C. § 271(f), it is easy for the courts to follow the letter of the statute but miss the purpose of patent protection in the United States.<sup>2</sup> I argue that courts should stop the current trend and instead look to the precedent of the 2004 case of

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1. 35 U.S.C. § 154 (a)(1) (2000).

2. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1368 (Fed. Cir. 2005); *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005).

*NTP, Inc., v. Research In Motion, Ltd.* when interpreting infringement under the general infringement provision of 35 U.S.C. § 271(a).<sup>3</sup>

This paper argues that United States patent infringement cases should be analyzed based on factors that determine the economic impact on the United States market rather than based on the statutory technicalities of where each element is made, used, or sold. These factors that I refer to as “territorial impact factors” are: (1) control (2) beneficial use, and (3) ownership.<sup>4</sup> Using these factors, courts can determine whether the impact from the potential infringement takes place primarily within the United States and thus affects the patent owner’s exclusive patent rights, or primarily outside of the United States and thus does not affect those exclusive rights.

Part I gives a historical perspective of the United States’ position on the extraterritorial impact of patent law. It discusses the presumption that a patent applies only within the territorial boundaries of the United States.<sup>5</sup> It then looks at several historic cases that have dealt with this presumption and analyzes how these cases would have been decided using the territorial impact factors.<sup>6</sup>

Part II discusses *Deepsouth Packing Co., Inc v. Laitram Corp.* and the statutory changes in 35 U.S.C. § 271(f) and § 271(g) enacted in reaction to the Court’s decision in *Deepsouth*.<sup>7</sup> It also discusses the current inconsistencies presented in cases that have attempted to define these new statutory sections.<sup>8</sup>

Part III discusses two subsequent cases, *Decca Limited. v. The United States* and *NTP, Inc., v. Research In Motion, Ltd.*, which defined and refined the concept of “territorial impact factors,” although not specifically referring to them by that name.<sup>9</sup>

Finally, Part IV discusses the benefits of using territorial impact factors as an interpretation of 35 U.S.C. § 271(a), and why they are a better way to deal with extraterritorial issues than sections 271(f) and

3. *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1340 (Fed. Cir. 2004).

4. *Id.* at 1370; *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (1976); *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 2005 U.S. App. LEXIS 15804, 75 U.S.P.Q.2d (BNA) 1763 (Fed. Cir. 2005).

5. *Foley Bros., Inc. v. Filardo*, 336 U.S. 281, 285 (1949).

6. *Dowagiac Mfg. v. Minnesota Moline Plow Co.*, 235 U.S. 641 (1915); *Boesch v. Graff*, 133 U.S. 697 (1890); *John Brown v. Duchesne*, 60 U.S. 183 (1856).

7. *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972).

8. *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1368 (Fed. Cir. 2003); *W.R. Grace & Co. – Conn. v. Intercat, Inc.*, 60 F. Supp. 2d 316, 321 (1999).

9. *Decca*, 544 F.2d at 1083; *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1370 (Fed. Cir. 2004).

(g). Then it analyzes how *Eolas Tech. Inc., v. Microsoft Corp.* and *AT&T Corp. v. Microsoft Corp.* should have been decided using the territorial impact factors rather than 35 U.S.C. § 271(f).<sup>10</sup>

## I. HISTORICAL PERSPECTIVE ON EXTRATERRITORIALITY

This section looks at the statutory rule governing patent infringement, the general rules behind construing statutes against finding an extraterritorial effect, and the famous cases dealing with this issue.

### A. General Statutory Rule and Its Interpretation

The basis for the United States patent system is Article I, Section 8, Clause 8 of the Constitution, which grants Congress the authority to enact legislation “to promote the progress of . . . useful arts, by securing for limited times to . . . inventors the exclusive right to their . . . discoveries.”<sup>11</sup> The statutory core of the current patent regime is derived from the Patent Act of 1952, which is found in 35 U.S.C. sections 1 – 376.<sup>12</sup> The definition of infringement is found at 35 U.S.C. 271(a) – (i).

Section 271(a) of the United States Patent Act states that “whoever without authority makes, uses, offers to sell, or sells any patented invention *within the United States* or imports *into the United States* any patented invention during the term of the patent therefore, infringes the patent.”<sup>13</sup> Therefore, by the very nature of the statute on its face, general infringement under section 271(a) is limited to actions that take place either “within” or “into” the United States.

The Supreme Court has stated that, generally, the courts of the United States should presume “that legislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial boundaries of the United States.”<sup>14</sup> This general presumption can be overcome when a party claiming extraterritorial application shows “the affirmative intention of the Congress clearly expressed.”<sup>15</sup> Thus, the statute covering general patent infringement, as it does not appear

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10. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1368 (Fed. Cir. 2005); *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005).

11. U.S. CONST. art. I, § 8, cl. 8.

12. The Patent Act of 1952 is the most recent Act, although it has been amended on several occasions. *See generally* 35 U.S.C. §§ 1-376 (2000) for the entire 1952 Patent Act.

13. 35 U.S.C.S. § 271(a) (emphasis added).

14. *Foley Bros., Inc. v. Filardo*, 336 U.S. 281, 285 (1949).

15. *Benz v. Compania Naviera Hidalgo, S.A.*, 353 U.S. 138, 147 (1957).

to show a contrary congressional intent, but rather discusses actions happening "within" or "into" the United States, has been interpreted to only apply to the United States and its territories.<sup>16</sup>

However, the territorial presumption is merely a canon of statutory construction, and it is generally accepted that Congress does have the power to legislate extraterritorially if it so chooses.<sup>17</sup> Sections 35 U.S.C. § 217(f) and (g) deal with infringement by exportation and importation of certain types of goods into and out of the United States. These subsections exemplify a showing of congressional intent to apply patent law outside the territorial boundaries of the United States. For example, in section 271(f) Congress has expanded patent infringement to include the exportation of all or substantial portions of the patented invention.<sup>18</sup> It states, "whoever without authority supplies or causes to be supplied *in or from the United States* all or a substantial portion of the components of a patented invention . . . shall be liable as an infringer."<sup>19</sup> Likewise, in section 271(g), Congress has made a limited exception for the importation of a product made by a process patented in the United States, unless certain limitations are found.<sup>20</sup> Section 271(g) states "whoever without authority *imports into the United States* or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer. . . ."<sup>21</sup> The exceptions include importation after the product was materially changed by subsequent processes,<sup>22</sup> or when the imported product becomes a trivial and nonessential component of another product.<sup>23</sup>

### B. Historic Cases

The Supreme Court, even when interpreting the reach of general patent infringement under section 271(a), has sometimes looked beyond the general presumption of territoriality to a broader goal of patent protection.<sup>24</sup> It has interpreted some actions that technically fall

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16. 35 U.S.C. § 271(a).

17. *Foley Bros.*, 336 U.S. at 284.

18. 35 U.S.C. § 271(f) (2000).

19. § 271(f)(1) (emphasis added).

20. § 271(g).

21. *Id.* (emphasis added).

22. § 271(g)(1).

23. § 271(g)(2).

24. *Dowagiac Mfg. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 650 (1915); *Boesch v. Graff*, 133 U.S. 697, 703 (1890); *John Brown v. Duchesne*, 60 U.S. 183, 198 (1856).

under the statute as non-infringements when the connection to the United States is weak.<sup>25</sup> The Supreme Court has also held some actions to be infringements when their actions have a strong economic impact on the patented invention within the United States.<sup>26</sup>

The cases below show how the Supreme Court has dealt with issues of patent infringement when an extraterritorial issue arises.<sup>27</sup> The reasoning and results of these three cases is in agreement with the territorial impact factor test. If these factors had been used, the result of these cases would not have changed. Thus, these seminal cases support the territorial impact factor test.

i. *Brown v. Duchesne*

The case of *John Brown v. Duchesne* was decided in 1856.<sup>28</sup> Although territorial language did not appear explicitly in the patent statute until the Patent Act of 1870,<sup>29</sup> the *Brown* court assumed that patent protection was territorial.<sup>30</sup> However, the *Brown* case did not stick to a literal interpretation of infringement.<sup>31</sup> The *Brown* court created a policy based exception for excusing an infringing act that did not have an economic impact on the United States market, even when the act was technically done “within the United States.”<sup>32</sup>

The plaintiff in *Brown*, patented an improved “gaff” used on boats.<sup>33</sup> The alleged infringer was a French vessel, which contained such a “gaff.”<sup>34</sup> The vessel was temporarily located in the Boston Harbor.<sup>35</sup> This was technically “use” within the territory of the United States because the vessel was in U.S. waters.<sup>36</sup> The court acknowledged that the words of the patent statute “taken by themselves, and literally construed, without regard to the object in view, would seem to sanction the claim of the plaintiff.”<sup>37</sup> However,

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25. *Dowagiac*, 235 U.S. at 650; *Brown*, 60 U.S. at 198.

26. *Boesch*, 133 U.S. at 703.

27. *Dowagiac*, 235 U.S. at 650; *Boesch*, 133 U.S. at 703; *Brown*, 60 U.S. at 198.

28. *John Brown v. Duchesne*, 60 U.S. 183 (1856).

29. The 1870 Act provided that the issuance of a patent granted the patent holder exclusive rights “throughout the United States and the Territories thereof. . . .” [Patent] Act of July 8, 1870, ch. 230, § 22, 16 Stat. 198, 201 (1870).

30. *Brown*, 60 U.S. at 195.

31. *Id.* at 194.

32. *See generally Brown*, 60 U.S. 183.

33. *Id.* at 193.

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.* at 194.

the court stated that patent laws “do not, and were not intended to, operate beyond the limits of the United States.”<sup>38</sup> Therefore, the court found no infringement.<sup>39</sup>

Applying the territorial impact factors to *Brown* would result in the same conclusion. Because the operation of the French vessel was almost exclusively outside of the territory of the United States, no infringement was found.<sup>40</sup> The “gaff” was owned by the French vessel, it was operated on the French vessel, and the economic benefit derived from this use was for the French owners and operators. Although the “gaff” was temporarily within United States waters, the territorial impact factors show that there was no detrimental effect on the exclusive rights of the United States patent owner. Therefore, the territorial impact factors, like the court’s decision in *Brown*, would find no infringement for the use of the “gaff” in this context.

## ii. Boesch v. Graff

The case of *Boesch v. Graff* was decided in 1890, when the Patent Act of 1870 was in effect.<sup>41</sup> Therefore, by this time, extraterritorial restrictions were statutory as well as a rule of case law.<sup>42</sup> *Boesch*, unlike *Brown*, dealt with an item that, although it was manufactured outside of the United States, was sold within the United States. Because of this difference, the court came to the opposite conclusion, ruling that there was enough action within the United States to qualify as an infringement.<sup>43</sup>

The issue in *Boesch* derived from the fact that the defendant received goods from a third party manufacturer in Germany.<sup>44</sup> Under German law, the manufacturer of the patented product, a type of lamp burner, was allowed to make and sell the products because German law recognized a “prior user right.”<sup>45</sup> A prior user right is one in which a user who has begun commercializing a product before an inventor files an application covering that product may continue to

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38. *Id.* at 195.

39. *Id.* at 199.

40. *Id.* at 189-99.

41. *Boesch v. Graff*, 133 U.S. 697 (1890).

42. [Patent] Act of July 8, 1870, ch. 230, § 22, 16 Stat. 198, 201 (1870).

43. *Boesch*, 133 U.S. at 703.

44. *Id.* at 702.

45. *Id.* at 703.

commercialize that product even after the patent issues.<sup>46</sup> The defendant argued that since the third party manufacturer did not infringe by making the lamp burners in Germany the defendant should not be liable for infringement by selling them in the United States.<sup>47</sup> This argument was rejected. The court stated that infringement occurs under US law when a sale is commenced “without the license or consent of the owners” and that the German prior user right could not provide a form of involuntary authority.<sup>48</sup> The court stated, “[t]he sale of articles in the United States under a United States patent cannot be controlled by foreign laws.”<sup>49</sup>

A similar result occurs when the facts of *Boesch* are analyzed under the territorial impact factors. Although the lamp burner was manufactured in Germany, the overall impact of the sale of the burner took place in the United States.<sup>50</sup> A United States consumer owned the product, the benefit of the lamp burner to the consumer took place in the United States, and the control of the lamp remained with the consumer who lived in the United States.<sup>51</sup> Therefore, no matter what protection prior user rights give to actions taking place in Germany, once the product is sold in America the detrimental effect is directly felt by the United States patent owner, and thus infringement has occurred.

iii. *Dowagiac Manufacturing Co. v. Minnesota  
Manufacturing Plow Co.*

*Dowagiac Manufacturing Co. v. Minnesota Manufacturing Plow Co.* was decided in 1915.<sup>52</sup> In this case, the issue revolved around sales that took place outside of the United States.<sup>53</sup> The court construed the infringement statute literally and concluded that sales outside of the United States could not be an infringement of a United States patent.<sup>54</sup>

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46. Donald S. Chisum, *Extraterritorial application of U.S. Intellectual Property Law: Comment: Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 VA. J. INT'L L. 603, 606 (1997).

47. *Boesch*, 133 U.S. at 699.

48. *Id.* at 702-03.

49. *Id.*

50. *Id.* at 704.

51. *Id.* at 702.

52. *Dowagiac Mfg. v. Minnesota Moline Plow Co.*, 235 U.S. 641 (1915).

53. *Id.* at 650.

54. *Id.*



*Dowagiac* involved sales of a patented improvement in grain drills.<sup>55</sup> The defendants purchased drills from a third party and sold some of them in the United States and to consumers in Canada.<sup>56</sup> The issue as to the infringement of the third party manufacturers and the sales in the United States was easily settled as direct infringement.<sup>57</sup> However, the issue as to whether the drills sold in Canada should also be considered an infringement was more difficult. The court determined that because these sales took place outside of the United States, they were beyond the territorial reach of United States patent law.<sup>58</sup> The court stated, “[t]he right conferred by a patent under our law is conferred to the United States and its territories and infringement of this right cannot be predicated on acts wholly done in a foreign country.”<sup>59</sup>

The same result would occur if the territorial impact factors were used to decide infringement in *Dowagiac*, in the same fashion that infringement was found in *Boesch*. The sale took place in Canada and the economic impact of its subsequent use would also be in Canada, not the United States. A Canadian consumer owned the drill, the benefit of the drill to the consumer took place in Canada, and the control of the drill remained with the consumer who lived in Canada. Therefore, no detrimental effect was felt by the United States patent owner because of the sale of the drill in Canada.

These three cases show that throughout the history of the Supreme Court’s assessment of direct infringement involving extraterritorial issues, a consistent pattern has arisen. This pattern is in agreement with the analysis used under the territorial impact factors test.

## II. CHANGES IN THE RULE

“In 1972 the Supreme Court faced a case that laid bare the full ramifications of the barriers that had been erected against extraterritorial applications of U.S. patent laws.”<sup>60</sup> *Deepsouth Packing Co., Inc. v Laitram Corp.* had a major effect on United States infringement analysis by motivating a Congressional amendment to

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55. *Id.* at 643.

56. *Id.* at 650.

57. *Dowagiac*, 235 U.S. at 643.

58. *Id.* at 650.

59. *Id.*

60. Alan M. Fisch & Brent H. Allen, *The Application of Domestic Patent Law to Exported Software*: 35 U.S.C. §271(f), 25 U. PA. J. INT’L ECON L. 557, 561 (2004).

the patent law.<sup>61</sup> The result in *Deepsouth* lead Congress to enact 35 U.S.C. § 271(f) in 1984, in order to “close a loophole in the patent law” pointed out by *Deepsouth*.<sup>62</sup> In 1988, another statute, 271(g), was passed to further protect U.S. patents from actions abroad.<sup>63</sup> These statutory changes have lead to debate as to whether an infringing “product” must be tangible or not. Current case law defines a § 271(f) “product” as intangible but requires tangibility for a “component” under § 271(g), which puts the current infringement subsections illogically at odds with each other.<sup>64</sup>

#### *A. Deepsouth Packing Co., Inc. v Laitram Corp*

The plaintiff in *Deepsouth* received a patent for a shrimp-deveining machine wherein the improvement over previous machines was a combination of a shrimp “slitter” and a shrimp “tumbler.”<sup>65</sup> The defendant manufactured all of the elements of the deveining combination patent, but then shipped the deveining equipment to foreign customers in three separate boxes.<sup>66</sup> The issue therefore was whether the defendant “made” the patented invention when the final step of assembly took place outside of the United States.<sup>67</sup> The court concluded that it did not.<sup>68</sup> The court stated that a combination patent, such as the one at issue in *Deepsouth*, “protects only against the whole and not the manufacture of its parts.”<sup>69</sup> The court went on to say that there must be a “clear congressional indication of intent to extend the patent privilege” before this action would be considered an infringement.<sup>70</sup>

#### *B. Statutory Changes 35 U.S.C § 271(f) and 35 U.S.C. § 271(g)*

Congress saw the holding in *Deepsouth* as a loophole in the patent laws.<sup>71</sup> In response, Congress added subsection (f) of section

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61. *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972).

62. Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong. § 101 (1984), reprinted in 1984 U.S.C.C.A.N. (98 Stat. 3383) 5827, 5828 (codified at 35 U.S.C. 271(f) (2000)).

63. 35 U.S.C. § 271(g) (2000).

64. *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1368 (2003); *W.R. Grace & Co. – Conn. v. Intercat, Inc.*, 60 F. Supp. 2d 316, 321 (1999).

65. *Deepsouth*, 406 U.S. at 520.

66. *Id.* at 524.

67. *Id.*

68. *Id.* at 532.

69. *Id.* at 528.

70. *Deepsouth*, 406 U.S. at 532.

71. *Fisch*, *supra* note 60, at 565.

271 as “a legislative solution to close a loophole in patent law.”<sup>72</sup> Section 271(f) provides, “whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention . . . shall be liable as an infringer.”<sup>73</sup> According to legislative history, Congress intended subsection (f) to “prevent copiers from avoiding U.S. patents by supplying components of a patented product in this country so that the assembly of the components may be completed abroad.”<sup>74</sup> The addition of subsection (f) was a major change in the definition of infringement under U.S. patent law as it more specifically addressed actions taken outside of the United States.<sup>75</sup> However, even with this change, Congress “relied on some domestic act as a hook to reach foreign-based economic activity that harms a patent owner’s interest in deriving full economic benefit from the U.S market for the patented invention.”<sup>76</sup>

Another extension of the patent law, although not a direct reaction to *Deepsouth*, came in 1988 under the Process Patent Amendments Act.<sup>77</sup> Under this act, 271(g) was added. Subsection (g) provides, “whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer. . . .”<sup>78</sup> In this subsection, the focus is even more on foreign activity, as it concentrates on products made abroad by a process which is patented in the United States.<sup>79</sup> However, technically section 271(g), like section 271(f), has no extraterritorial effect because the infringement arises only once the product has been imported into the United States.<sup>80</sup>

### C. The “tangible” debate

Case law has understood “product” differently for subsection (f) and subsection (g). It has determined that a “product” under

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72. Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong. § 101 (1984), reprinted in 1984 U.S.C.C.A.N. (98 Stat. 3383) 5827, 5828 (codified at 35 U.S.C. 271(f) (2000)).

73. 35 U.S.C. § 271(f)(1) (2000).

74. Patent Law Amendments Act of 1984, H.R. 6286, 98th Cong. § 101 (1984), reprinted in 1984 U.S.C.C.A.N. (98 Stat. 3383) 5827, 5828 (codified at 35 U.S.C. 271(f) (2000)).

75. *Id.* at 5827.

76. Chisum, *supra* note 46, at 607.

77. Pub. L. No. 100-418, 9003, 102 Stat. 1563 (1988).

78. 35 U.S.C. § 271(g).

79. *Id.*

80. Chisum, *supra* note 46, at 607.

subsection (f) does not have to be tangible.<sup>81</sup> It could, for example, be computer software.<sup>82</sup> However, under subsection (g) case law has determined that a “product” needs to be tangible.<sup>83</sup> For example, a lab result does not qualify.<sup>84</sup> The two subsections show no inherent intent for a product to have two different definitions, so the current lack of uniformity is puzzling.

i. *W.R. Grace & Co. – Conn. v. Intercat, Inc.* and 271(f)

In *W.R. Grace & Co. – Conn., v. Intercat, Inc.*, the issue revolved around a patented chemical compound for reducing sulfur emissions in oil refining processes.<sup>85</sup> The defendant argued that section 271(f) did not apply to its international sales because the legislative history “states that the statute only covers components of machines and other structural combinations, since the section was enacted specifically to overrule [*Deepsouth*].”<sup>86</sup> The court rejected this argument, and stated, “[n]owhere in the statute or its legislative history is there a limitation to components of machines and other structural combinations.”<sup>87</sup> Thus, the court ruled that the defendant could be held liable for foreign distribution of the chemicals under 271(f).<sup>88</sup> Cases following *Grace* expanded the definition of 271(f) “products” to include software and other intangible products as well.<sup>89</sup>

ii. *Bayer AG v. Housey Pharmaceuticals, Inc.* and 271(g)

The opposite result for the definition of “product” was reached in *Bayer AG v. Housey Pharmaceuticals, Inc.* by analyzing 271(g).<sup>90</sup> Housey owned several patents directed to a method of screening substances for use as protein inhibitors.<sup>91</sup> Bayer performed this method outside of the United States, imported the information into the

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81. *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005); *W.R. Grace & Co. – Conn. v. Intercat, Inc.*, 60 F. Supp. 2d 316, 321 (1999).

82. *Eolas*, 399 F.3d at 1328.

83. *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1368 (Fed. Cir. 2003).

84. *Id.* at 1368.

85. *Grace*, 60 F. Supp. 2d at 319.

86. *Id.* at 320 (quoting Patent Law Amendments Act 1984, H.R. 6286, 98th Cong. § 101 (1984), reprinted in 1984 U.S.C.A.N. (98 Stat. 3383), 5827, 5828 (codified at 35 U.S.C. 271(f)(2000))).

87. *Id.* at 321.

88. *Id.*

89. *Eolas Tech. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005).

90. *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1368 (Fed. Cir. 2003).

91. *Id.* at 1368-69.

U.S., and used it to develop drugs.<sup>92</sup> Bayer argued that section 271(g) applied only to a method of manufacture and not to a method of use, as was claimed by Housey, so its actions were not covered under section 271(g).<sup>93</sup> The court looked extensively at the plain meaning, dictionary definition, and legislative history in determining the meaning of the terms of subsection (g) and determined that the manufacture of a physical and tangible product was necessary for infringement.<sup>94</sup> The court stated that in order for a product to be “made by a process patented in the United States” it must have been a physical article.<sup>95</sup> Therefore, it determined that the production of information is not covered under section 271(g).<sup>96</sup>

*Bayer* and *Grace* show that the case law is in disagreement as to whether a “product” must be tangible or not.<sup>97</sup> The distinction is confusing and a more general rule is needed. The need to parse the definitions of section 271(f) and 271(g) could be eliminated or greatly reduced by expanding the application of section 271(a) using the territorial impact factors.

### III. THE CREATION OF THE TERRITORIAL IMPACT FACTORS

The three territorial impact factors include: (1) control, (2) beneficial use, and (3) ownership.<sup>98</sup> They are used to determine where the economic impact of potentially infringing activity takes place, which determines whether a U.S. patent owner is deriving his full economic benefit from the U.S. market.<sup>99</sup> If the economic benefit from the U.S. market of the patent owner is reduced by the potential infringer’s activities, then the territorial impact factors show that a true infringement has taken place.

The territorial impact factors first appeared in the 1976 decision of *Decca Limited v. United States*.<sup>100</sup> In *Decca*, they were applied in conjunction with a straightforward claim interpretation, which made them hardly necessary. However, in the 2003 decision of *NTP Inc. v.*

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92. *Id.* at 1370.

93. *Id.*

94. *Id.* at 1370-77.

95. *Id.* at 1377.

96. *Id.*

97. *Id.* at 1368; *W.R. Grace & Co. – Conn. v. Interact, Inc.*, 60 F. Supp. 2d 316, 321 (1999).

98. *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (1976); *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1370 (Fed. Cir. 2004).

99. *Decca*, 544 F.2d at 1083; *NTP*, 392 F.3d at 1370.

100. *Decca*, 544 F.2d at 1070.

*Research In Motion, Ltd.*, the territorial impact factors played a central role in the determination of infringement.<sup>101</sup> This paper advocates the continued use of the territorial impact factors in future extraterritorial infringement actions.

*A. Decca Limited v. The United States – Introducing The Territorial Impact Factors*

*Decca Limited v. The United States* dealt with the issue of where the “using” and “making” of a patented invention took place.<sup>102</sup> The invention was to a worldwide broadcasting system used to pinpoint ship and aircraft locations by use of a master station located in the United States’ several transmitter stations, one of which was located in Norway.<sup>103</sup> Decca argued that the U.S. government infringed its patent by operating this global positioning system. However, the government argued, “a claim is infringed only when an operative assembly of the entire claimed combination is made within the territorial limits of the United States.”<sup>104</sup> The court disagreed. It determined that although one of the elements necessary for the system to work, the Norway transmitter station, was located outside of the United States, other factors determined that the use was still essentially within the United States.<sup>105</sup> The *Decca* court based its conclusion on the territorial impact factors.<sup>106</sup> It stated:

This conclusion does not rest on any one factor but on the combination of circumstances here present, with particular emphasis on the *ownership* of the equipment by the United States, the *control* of the equipment by the United States and on the actual *beneficial use* of the system within the United States.<sup>107</sup>

It must be noted however that the *Decca* court did not directly apply the territorial impact factors that it created. It stated that the specific claim at issue in its case was to the reception of the signals, and not to the generation of the signals.<sup>108</sup> The reception took place only in the United States, whereas the generation took place both

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101. *NTP*, 392 F.3d. at 1370.

102. *Decca*, 544 F.2d at 1082.

103. *Id.* at 1074.

104. *Id.* at 1081.

105. *Id.* at 1082-83.

106. *Decca*, 544 F.2d at 1083.

107. *Id.* (emphasis added).

108. *Id.*

inside and outside of the United States.<sup>109</sup> The *Decca* court stated that, “had the invention dealt with generation of the signals themselves, it seems clear that the utilization of those signals in this country would . . . have been beyond the reach of the U.S. patent laws.”<sup>110</sup> This limitation to the specific claim interpretation may have contributed to the extensive time between the *Decca* decision and the next use of the territorial impact factors.

*B. NTP Inc. v Research In Motion, Ltd. – Using The Territorial Impact Factors*

*NTP Inc. v. Research In Motion, Ltd* is the first case to exclusively use the territorial impact factors in deciding whether an infringement took place under section 271(a).<sup>111</sup> For this reason, it is a pivotal case in defining a new era of patent infringement analysis. Cases in the future should look to *NTP*’s use of the territorial impact factors in determining infringement of U.S. patents.

*NTP* owned several patents to a remote electronic mail system wherein an email message could be viewed on a remote receiver.<sup>112</sup> Research In Motion (RIM) is a Canadian corporation that produces the BlackBerry system for remote access of email.<sup>113</sup> Under RIM’s system, a signal is sent from one hand held BlackBerry device to another computer or BlackBerry device by connecting to a remote “relay” system located in Canada.<sup>114</sup> RIM contended, “because the BlackBerry ‘relay’ is located in Canada, as a matter of law RIM cannot be held liable for infringement under 35 U.S.C. § 271.”<sup>115</sup> The court however, disagreed.

The *NTP* court stated, “section 271(a) is only actionable against patent infringement that occurs within the United States.”<sup>116</sup> However, the *NTP* court found that infringement had occurred by using the territorial impact factors.<sup>117</sup> The court distinguished the *NTP* case from the *Deepsouth* case by showing that the location of the infringement in *NTP* took place in the United States, whereas the location of the infringement in *Deepsouth* was outside of the United

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109. *Id.*

110. *Id.*

111. *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336 (Fed. Cir. 2004).

112. *Id.* at 1341.

113. *Id.* at 1341-42.

114. *Id.* at 1342.

115. *Id.* at 1364.

116. *NTP*, 392 F.3d at 1366.

117. *Id.* at 1371.

States.<sup>118</sup> The court then proved this location using the territorial impact factors from *Decca*.<sup>119</sup> The court stated:

Although RIM's Relay, which is located in Canada, is the only component that satisfies the "interface" of the "interface switch" limitation asserted in the claims, because all of the other components of RIM's accused system are located in the United States, and the control and beneficial use of RIM's system occurs in the United States, we conclude that the situs of the "use" of RIM's system for purposes of section 271(a) is the United States.<sup>120</sup>

The territorial impact factors were thus used to decide that infringement had occurred.<sup>121</sup>

#### IV. THE FUTURE OF TERRITORIAL IMPACT FACTORS

The groundbreaking analysis in *NTP* comes from its use of the territorial impact factors to find infringement even when one of the elements necessary for infringement did not occur in the United States.<sup>122</sup> In this way, *NTP* is quite different from *Decca*, which explicitly stated that the court would not have found infringement if the claims had been directed to what was occurring abroad.<sup>123</sup> This use of the territorial impact factors as a distinct and sufficient showing of infringement is what future courts should follow in analyzing infringing activity that has elements taking place both inside and outside of the United States.

##### *A. The Benefits of Using The Territorial Impact Factors*

The territorial impact factors of (1) control (2) beneficial use and (3) ownership look to the economic impact of a possible infringing act rather than to parsing the terminology of the patent infringement statute.<sup>124</sup> This results in a judicial balancing test that fulfills the purpose of patent protection.

The idea that a U.S. patent should only cover actions that take place "within" the United States is outdated. It is an inadequate guide for legislation or judicial interpretation in a global economy. From the

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118. *Id.* at 1369.

119. *Id.* at 1370.

120. *NTP*, 392 F.3d at 1370.

121. *Id.*

122. *Id.*

123. *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (1976).

124. *Id.* at 1083; *NTP*, 392 F.3d at 1370.



extraction of “raw materials to the sale and use of a final consumer product, [products] are distributed internationally in a myriad of ways.”<sup>125</sup> A patent’s scope should instead match the function of the “market of the territory of the country issuing the patent.”<sup>126</sup> Matching the function of the market is accomplished neatly by applying the territorial impact factors.

*B. Sections 271(f) and 271(g) Are Too Narrow*

The use of the territorial impact factors is preferable over the creation of specific statutory protections for determining when an act that takes place partially outside of the United States is an infringement. Subsections (f) and (g) show Congress’ recent inclination to attempt to adequately protect inventions patented in the United States from the harms of global trade. However, the method of protection under these subsections is limited to certain types of activities, such as exportation of “substantial portions” of a patented product or the sale, offer for sale, or use of a product made from a patented process once it has been imported into the United States.<sup>127</sup> Thus, under these limited exceptions, a use which takes place in more than one country, even if mostly in the United States would not be covered. In addition, although both subsection (f) and subsection (g) speak of a “product,” case law has interpreted the definition of “product” differently under each subsection.<sup>128</sup> Thus, the application of the infringement statute is not uniform. Rather than creating specialized exceptions to the patent infringement definition courts should use a broad test that focuses on helping the U.S. patent holder derive full economic advantage of the U.S. market for his product. Courts should follow *NTP*’s use of the territorial impact factors in determining infringement.

*C. How Eolas Tech Inc. v. Microsoft Corp. and AT&T Corp. v. Microsoft Corp. Would Have Been Decided Under The Territorial Impact Factors*

*Eolas Tech. Inc., v. Microsoft Corp. and AT&T Corp. v. Microsoft Corp.* are examples of cases that were decided poorly

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125. Chisum, *supra* note 46, at 608.

126. *Id.*

127. 35 U.S.C. § 271(f), § 271(g) (2000).

128. 35 U.S.C. § 271(f) (2000); 35 U.S.C. § 271(g) (2000); *W.R. Grace & Co. – Conn. v. Intercat, Inc.*, 60 F. Supp. 2d 316, 321 (1999); *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1368 (Fed. Cir. 2003).

because they were based on applying the specific definition of 35 U.S.C. 271(f).<sup>129</sup> In *Eolas*, the plaintiff held a patent to an invention that allowed users to use a web browser in a fully interactive environment, and alleged that certain aspects of Microsoft's Internet Explorer product incorporated its invention.<sup>130</sup> Microsoft exported a limited number of "golden master disks" containing the Windows operating system to manufacturers abroad who then replicated the code onto hard drives for *sale outside of the United States*.<sup>131</sup> The *Eolas* court construed the issue to be whether software code made in the United States and exported abroad was a "component of a patented invention under section 271(f)." <sup>132</sup> The court concluded that the software code on a golden master disk was a component because the language of 271(f) does not impose any requirement of "tangibility." In addition, the court found that sound policy counsels against varying the definition of "component" according to the particular form of the part under consideration.<sup>133</sup>

The *AT&T* case had almost identical facts, with Microsoft supplying the "gold master disks" to foreign manufacturers.<sup>134</sup> Likewise, the *AT&T* decision followed the *Eolas* definition of a "component."<sup>135</sup> The Court further went on to rule that software replicated abroad from a master version exported from the United States with the intent that it be replicated is deemed to be "supplied" from the United States for the purposes of section 271(f).<sup>136</sup> The Court stated, "Given the nature of the technology the 'supplying' of software commonly involves generating a copy."<sup>137</sup>

This analysis of the definition of 271(f) in *Eolas* and *AT&T* follows previous case law decisions.<sup>138</sup> However, the result is that an infringement of a U.S. patent was found in a situation where all of the products using the potentially infringing code were for "sale outside

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129. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005); *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005).

130. *Eolas*, 399 F.3d at 1328.

131. *Id.* at 1331 (emphasis added).

132. *Id.* at 1338.

133. *Id.* at 1339-41.

134. *AT&T*, 414 F.3d at 1368.

135. *Id.* at 1369.

136. *Id.* at 1369-71.

137. *Id.* at 1370.

138. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1371 (Fed. Cir. 2005); *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325, 1328 (Fed. Cir. 2005); *W.R. Grace & Co. – Conn. v. Intercat, Inc.*, 60 F. Supp. 2d 316, 321 (1999).

of the United States.”<sup>139</sup> This result is an example of following the letter of the statute and missing the purpose of patent protection in the United States. United States patent protection should only extend to the economic advantage from the U.S. market.<sup>140</sup> In *Eolas* and *AT&T*, the U.S. market was not affected by the exportation of the golden master disks. Infringement should have been found based on patents filed in the countries where the hard drives were sold.

Had *Eolas* and *AT&T* been analyzed using the territorial impact factors, the result would have been in keeping with protecting the economic advantage from the U.S. market only. First, the ownership of the hard drive containing the infringing code is “outside of the United States.”<sup>141</sup> Second, control of the hard drive is only with the consumer, who is located outside of the United States. Finally, the beneficial use of the Windows operating system is also for the consumer located outside of the United States. The territorial impact factors all point to non-infringement. Non-infringement makes sense when ownership, control, and beneficial use are outside of the United States. The U.S. patent owner is not economically disadvantaged by the consumer activities taking place wholly outside of the United States. Therefore, the territorial impact factors follow the purpose of patent protection in *Eolas* better than a strict interpretation of infringement under 35 U.S.C. § 271(f).

## CONCLUSION

In a world where products are often made and assembled in different countries than where they are eventually sold and used, the strict concept of territoriality of patents breaks down. Instead, a U.S. patent’s scope should protect the economic advantage in the U.S. market. This type of protection focuses on the purpose of territorial protection rather than strictly on language parsing of the Patent Act. The best way to accomplish this analysis is by use of the territorial impact factors of (1) control, (2) ownership, and (3) beneficial use of the allegedly infringing product.<sup>142</sup>

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139. *Eolas Tech. v. Microsoft Corp.*, 399 F.3d 1325, 1331 (Fed. Cir. 2005).

140. Chisum, *supra* note 46, at 608.

141. *Eolas*, 399 F.3d at 1331.

142. *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1370 (2004); *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (1976).